

Docket No.: NC 83072
Application No.: 09/986,016

This listing of claims will replace all prior versions and listings of claims in the application:

Listings of the Claims:

Handwritten: 1/2/03

Claim 1 (currently amended): A disruptive camouflage pattern system consisting of a macro pattern and a micro pattern wherein the micro pattern is formed of sharp edged pixels proportional to the size of a camouflaged subject, the pixels are in at least ~~two~~ four colors with a gradation of colors from dark to light wherein the pattern repeats in set intervals and, within th repeat of the pattern, the lightest color is a base color including approximately 5 % of the repeat, the next darkest color including approximately 47 % of the repeat, the next darkest color including approximately 30 % of the repeat, and the darkest color including approximately 18 % of the repeat, combinations of the micro pattern pixels form shapes of the macro pattern, combinations of the micro pattern pixels forming a specific macro pattern shape can be of the same or different colors, the macro pattern shape disrupts the shape of the camouflaged subject, the ratio of light to dark pixels in the micro pattern blends the subject into the background, the combined effect of the micro and macro pattern provides disruptive camouflage in both the human visible and near infrared light range and the camouflaged subject has a Lightness value (L^*), that is comparable to the negative space surrounding the camouflaged subject.

Claim 2 (canceled)

Claim 3 (currently amended): The disruptive pattern system of Claim 1 ~~2~~ wherein the color palette is selected from color groups referred to as Woodland, Desert and Urban.

Claim 4 (original): The disruptive pattern system of Claim 3 wherein the Woodland color group is a combination of black, green, coyote and khaki listed in order from darkest to lightest color.

Docket No.: NC 83072
Application No.: 09/986,016

Claim 5 (original): The disruptive pattern system of Claim 3 wherein the Desert color group is a combination of highland, light coyote, urban tan and desert light tan listed in order from darkest to lightest color.

Claim 6 (original): The disruptive pattern system of Claim 3 wherein the Urban color group is a combination of black, medium gray, coyote and light gray listed in order from darkest to lightest color.

Claims 7-14 (canceled)

Claim 15 (original): The disruptive pattern system of Claim 7 where the pattern is printed on a fabric consisting of from about 30 % to about 80 % nylon and the remainder is cotton.

Claim 16 (original): The disruptive pattern system of Claim 15 where the fabric consists of 50% nylon and 50% cotton.

Claim 17 (original): The disruptive pattern system of Claim 7 wherein the lightness value (L^*) of the system decreases between 17 % and 28 % in the wet state from that of the dry state.

Claim 18 (original): The disruptive pattern system of Claim 15 wherein the lightness value (L^*) of the system decreases between 17 % and 28 % in the wet state from that of the dry state.

Claim 19 (original): The disruptive pattern system of Claim 16 wherein the lightness value (L^*) of the system decreases between 17 % and 28 % in the wet state from that of the dry state.

Docket No.: NC 83072
Application No.: 09/986,016

Claim 20 (currently amended): A method of printing fabric with a disruptive pattern operative in the human visible and near infra-red light range ~~which comprises~~ comprising the steps of first dyeing the fabric with acid dyes to establish a base or ground color and subsequently overprinting the base color with at least ~~three~~ one darker colors of a vat in a specific pattern applied by screen printing, wherein the disruptive pattern comprises at least a macro pattern and a micro pattern wherein the micro pattern is formed of sharp edged pixels proportional to the size of a camouflaged subject, the pixels are in at least four colors with a gradation of colors from dark to light wherein the pattern repeats in set intervals and, within the repeat of the pattern, the lightest color is a base color including approximately 5 % of the repeat, the next darkest color including approximately 47 % of the repeat, the next darkest color including approximately 30 % of the repeat, and the darkest color including approximately 18 % of the repeat, combinations of the micro pattern pixels form shapes of the macro pattern, combinations of the micro pattern pixels forming a specific macro pattern shape can be of the same or different colors, the macro pattern shape disrupts the shape of the camouflaged subject, the ratio of light to dark pixels in the micro pattern blends the subject into the background, the combined effect of the micro and macro pattern provides disruptive camouflage in both the human visible and near infrared light range and the camouflaged subject has a Lightness value (L^*), that is comparable to the negative space surrounding the camouflaged subject.

Claim 21 (original): The method of Claim 20 wherein the base color is overprinted in a specific pattern by three vat dye colors in a specific pattern, each vat dye is applied by a separate screen.

Claim 22 (original): The method of Claim 21 wherein base color is established by mixing appropriate amounts of Acid Blue and Tectilon Orange.

Docket No.: NC 83072
Application No.: 09/986,016


Claim 23 (original): The method of Claim 20 wherein the vat dyes are prepared by mixing the appropriate proportions of dyes selected from the group consisting of Vat Yellow, Vat Green, Vat Brown, and Sulfur Black.

Claim 24 (canceled)

Claim 25 (currently amended): The A combat utility uniform of Claim 24 26 treated for permanent press.

Claim 26 (currently amended): A combat utility uniform ~~of Claim 25~~ comprising articles of clothing selected from the group consisting of a head covering, a blouse, a pair of pants, and combinations thereof, printed with a disruptive camouflage pattern system comprising at least consisting of a macro pattern and a micro pattern wherein the micro pattern is formed of sharp edged pixels proportional to the size of a camouflaged subject, the pixels are in at least two four colors with a gradation of colors from dark to light, wherein the pattern repeats in set intervals and, within the repeat of the pattern, the lightest color is a base color including approximately 5 % of the repeat, the next darkest color including approximately 47 % of the repeat, the next darkest color including approximately 30 % of the repeat, and the darkest color including approximately 18 % of the repeat, combinations of the micro pattern pixels form shapes of the macro pattern, combinations of the micro pattern pixels forming a specific macro pattern shape can be of the same or different colors, the macro pattern shape disrupts the shape of the camouflaged subject, the ratio of light to dark pixels in the micro pattern blends the subject into the background, the combined effect of the micro and macro patterns provides disruptive camouflage in both the human visible and near infra-red light ranges and the camouflaged subject has a Lightness value (L^*), that is comparable to the negative space surrounding the camouflaged subject.

Docket No.: NC 83072
Application No.: 09/986,016



Claim 27 (new): The combat utility uniform of Claim 26 comprising a head covering, a blouse, and a pair of pants, a collar on the blouse that provides means for sealing out weather elements when raised and no protuberances that can cause irritation points under body armor when down in normal wearing position, pockets on the blouse at a 65 degree angle to a vertical axis, pockets on the sleeves and means for providing elbow padding in the sleeves, pockets on the outside of the pants leg, means for providing knee pads on the inside of the pants leg, closures on all pockets that do not make noise.

Claim 28 (new): The combat utility uniform of Claim 26 wherein the pattern is printed on a fabric including approximately 30 % to approximately 80 % nylon and the remainder is cotton.

Claim 29 (new): The combat utility uniform of Claim 29 where the fabric consists of 50 % nylon and 50% cotton.

Claim 30 (new): The combat utility uniform of Claim 26 wherein the lightness value (L^*) of the system decreases between 17 % and 28 % in the wet state from that of the dry state.

Docket No.: NC 83072
Application No.: 09/986,016

Amendments to the Abstract of the Disclosure:

Please replace the prior version of the abstract of the disclosure with the following paragraph.

A disruptive camouflage pattern system to be used for both military ~~uniforms and equipment and~~ civilian applications. The system includes specialized ~~means of techniques for~~ printing the camouflage pattern system unto fabric. ~~The system can also be used for civilian applications, particularly with sportsmen hunters.~~ The system provides camouflage in both the human visible light range and the near infrared range. The system depends on ~~the use of a macro pattern~~ macro pattern resulting from a repeat of a ~~micro pattern~~ micro pattern. ~~When applied to fabric, a polyamide cotton fiber blend has a macro pattern resulting from a repeat of a micro pattern printed on at least one surface.~~ The coloring system used ~~comprises~~ includes at least four colorings from dyes that in combination produce a percent reflectance value comparable to that of the negative space of the camouflaged subject's surroundings ~~near the camouflaged subject~~. The system functions by a macro pattern being disruptive of the subject's shape ~~of the subject~~ and a micro pattern ~~comprising~~ having sharp edge units of a size capable of blending the subject into the its background. The relative lightness values and percentages of total pattern, wet or dry, are sufficient to produce a percent reflectance of acceptable colors, ~~wet or dry~~ in terms of lightness values ~~compared to~~ unlike current military four-color camouflage. ~~On fabric, the results are achieved by printing A macro pattern that disrupts the sensed shape and a micro pattern with a repeat size that produces the macro pattern. The reflectance of the material is comparable to the negative space surrounding a subject so that the subject does not appear too dark or too light (out of place). The variation in lightness between wet and dry is not greater than 17-28%, achieved during the printing process.~~

Docket No.: NC 83072
Application No.: 09/986,016

Amendment to the Drawings:

There are no modifications to the original drawings.